



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

WASHINGTON, D.C. 20546

DD/ST# 3328-68

IN REPLY REFER TO: RAO

AUG 23 1968

ADM-11.1

Director
Central Intelligence Agency
Washington, D.C. 20205

Dear Sir:

The National Aeronautics and Space Administration has scheduled a Conference on Progress of NASA Research Relating to Noise Alleviation of Large Subsonic Jet Aircraft to be held at the Langley Research Center, Langley Station, Hampton, Virginia, on October 8, 9, and 10, 1968. The Conference is being organized to provide Government agencies and industry with the most recent NASA research results relating to the subsonic jet aircraft noise program. The subject matter, which will be unclassified, and scope of the Conference are indicated in more detail on the enclosed tentative program.

You are cordially invited to nominate two members of your organization to participate in the Conference. Because of limitations in seating capacity of the Conference facilities, it is necessary to limit the total attendance on each day to the number that can be properly accommodated. If you wish to have different representatives attend on each of the three days, you may nominate additional persons provided that only two will attend on a given day. Space is provided on the enclosed attendance forms for indicating the dates of attendance of your representatives.

For the accommodation of the conferees, blocks of rooms have been reserved at the Chamberlin Hotel, Old Point Comfort, Virginia. Reservation cards are enclosed for your convenience.

Bus transportation will be provided between the Chamberlin Hotel and the Conference location ("Activities Building" No. 1222 located in the west area of Langley Field) each day of the Conference. On the first day the busses will start leaving the hotel at 8:00 a.m. (last bus will leave at 8:15 a.m.) in time for 8:30 a.m. registration.

The completed acceptance form should be mailed by September 9, 1968, to: Code RAO, National Aeronautics and Space Administration, Washington, D.C. 20546. If there are any additional questions, please contact Mr. William A. McGowan, telephone ((AC-202) 962-4601).

Sincerely yours,



Charles W. Harper
Deputy Associate Administrator
(Aeronautics)
Office of Advanced Research
and Technology

Enclosures

- Tentative Agenda -

Conference on Progress of NASA Research Relating to
Noise Alleviation of Large Subsonic Jet Aircraft
October 8, 9, and 10, 1968, NASA Langley Research Center

October 8, 1968

Welcome by NASA Officials

Remarks by DOT Official

Conference Scope, Guidelines, and Noise Concepts by Harvey H. Hubbard
(Langley)

I. Nacelle Acoustic Treatment Technology

Duct Lining Acoustic Materials and Concepts by R. A. Mangiarotty
(Boeing), A. H. Marsh (McDonnell Douglas), and E. A. Feder
(Pratt and Whitney)

Nonlinear Acoustic Theory for Thin Porous Sheets by William E.
Zorumski (Langley)

Some Experimental Results on Inlet Suppressors by L. Jack
Smith (Lewis)

Prediction of Sound Attenuation in Acoustically Lined Ducts or
Suppressors by C. E. Feiler, E. J. Rice, and P. R. Wieber (Lewis)

Structural and Environmental Studies of Duct Lining Acoustic
Materials by H. A. Watson, Jr., and J. D. Thompson (McDonnell
Douglas) and Philip M. Edge, Jr., and Carl E. Rucker (Langley)

II. Nacelle Acoustic Treatment Application

Introductory Remarks by Harry T. Norton, Jr. (Langley)

Design Concepts by R. E. Pendley (McDonnell Douglas)

Ground Run-Up Tests of Prototype Treated Inlets and Fan Ducts by
A. H. Marsh, E. C. Zwieback, and J. D. Thompson (McDonnell Douglas)

Flight Test Nacelles by J. S. Coxon and C. A. Henry (McDonnell Douglas)

Noise Prediction and Economic Effects of Nacelle Modifications by
R. E. Pendley and A. H. Marsh (McDonnell Douglas)

Fan Duct Development by R. B. McCormick (Boeing)

Treated Inlets by G. T. Drakeley and R. B. McCormick (Boeing)

Sonic Throat Inlets by C. C. Higgins (Boeing)

Noise Predictions and Economic Effects of Nacelle Modifications
by D. C. Nordstrom (Boeing)

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III. Noise Generation and Reduction at the Source

Design Considerations for a Quiet Engine by Joseph F. McBride (Lewis)

Quiet Engine Program by James J. Kramer (Lewis)

Compressor Noise Analysis by Martin Lowson (Wyle)

Potential of IGV Configurations for Inlet Noise Reduction by
David Chestnutt and John L. Crigler (Langley)

Jet Engine Internal Flow Noise Sources by Colin Gordon (Bolt
Beranek and Newman)

Crossed Beam Investigation of Local Sound Generation in Jets by
Fritz Krause (Marshall)

IV. Operational Considerations

Measurements for Evaluating the Noise Characteristics of Aircraft
by David A. Hilton and Herbert R. Henderson (Langley)

Predicted and Measured XB-70 Engine Noise by Norman J. McLeod,
Paul L. Lasagna, and Terrill W. Putnam (Flight)

Noise Measurements During Climbout and Landing Operations of Jet
Transports by W. Latham Copeland and Domenic J. Maglieri (Langley)

Flight Investigation of Methods for Implementing Noise Abatement
Landing Approaches by Hervey C. Quigley, Robert C. Innis, and
Emmett B. Fry (Ames)

Technique for Calculating Optimum Takeoff Trajectories for Noise
Abatement by Heinz Erzberger and Homer Q. Lee (Ames)

Propagation of Noise From Airport Ground Operations by Dwight
Bishop (Bolt Beranek and Newman)

Ground Plane Effects of Far Field Sound Propagation by Stanley H. Guest (Marshall)

The Effects of Atmospheric Refraction on Far Field Sound Propagation by Orville E. Smith (Marshall)

Simulation of Aircraft Flyover Noise Signatures by Ernest Hinterkeuser (Boeing-Vertol)

October 10, 1968

V. Subjective Reaction

Effects of Noise on Man by Karl D. Kryter (Stanford)

Studies Relating the Individual Characteristics of People With Their Response to Noise by Richard G. Pearson (North Carolina State University)

Perceived Noise Level Corrections for Pure Tones by Karl Pearsons (Bolt Beranek and Newman)

Judgement Tests of Aircraft Noise by Karl D. Kryter (Stanford)

Building Vibrations Significant for Indoor Subjective Response by William H. Mayes, Donald S. Findley, and Huey D. Carden (Langley)

Acoustic-Sociometric Studies of Airport Communities by William R. Hazard and William Conner (Tracor)

CONFERENCE ON PROGRESS OF NASA RESEARCH
RELATING TO NOISE ALLEVIATION OF LARGE SUBSONIC
JET AIRCRAFT

Langley Research Center
Hampton, Va.

October 8, 9, and 10, 1968

NAME	WILL ATTEND ON		
	OCTOBER		
	8	9	10
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Company or Organization

Mail by September 9, 1968 TO:

Code RAO
NASA Headquarters
Washington, D.C. 20546